

Ryan Chouest daily data transmission and report

Period covered: 1000 hrs 07/05/2010-1000 hrs 07/06/2010

105.734 – Nautical miles covered

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Objective:

To investigate the occurrence and distribution of dissolved hydrocarbon concentrations in the loop current area.

Cruise notes:

At 0900 hrs on 07/05, contact with Simon Lisiecki was successful from the overnight location at 27°09.528'N, 82°47.458'W. The new plan involved heading west from our current location to 27°09.528'N, 86°W to survey the area of loop current and then to 28°37.527'N, 88°06.547'W, 10 miles outside MC 252 location. The last two segments would trend to the Desoto Canyon area (29°09.528'N, 87°04.027'W) and finally to Mobile bay (30°07.461'N, 88°04.336'W) (Figure1). C&C crew made an Eco sounder request to be executed on docking at Theodore.

The underway sensor data was collected through the trip back to the updated Cruise 6 track with the exception of a temporary halt when the underway pump showed a 'running dry' alarm at 1920 hrs when the ship travelled at a speed more than 9.5kts. System recovered when the ship reduced the speed to 8.5kts at 2018 hrs.

Two vertical casts down to 120m depth were conducted at 0120hrs and 0800hrs on 07/06 aiming to obtain the vertical concentration profile of the dissolved poly aromatic hydrocarbons in the loop current area.

Science results and preliminary interpretation:

Fluorimetry results

Fluorimetry results from the Chelsea, Trios, and Contros sensors, all show very low poly aromatic hydrocarbon levels. These results indicate that inferred hydrocarbon concentrations over the track covered (Figures 2-4) are extremely low. Results obtained from the two vertical casts undertaken, together with the third vertical cast to be performed in the loop current area will be presented in the next daily report.

Surface Observations

Clear waters throughout distance covered. Crew aboard did encounter several dolphins for a substantial period that commenced close to 1750 hrs to 29°09.20'N, 83°42.90'W (Photo 1). A school of dolphins were also spotted close to 27°08.82'N, 84°28.78'W, at 2226 hrs.

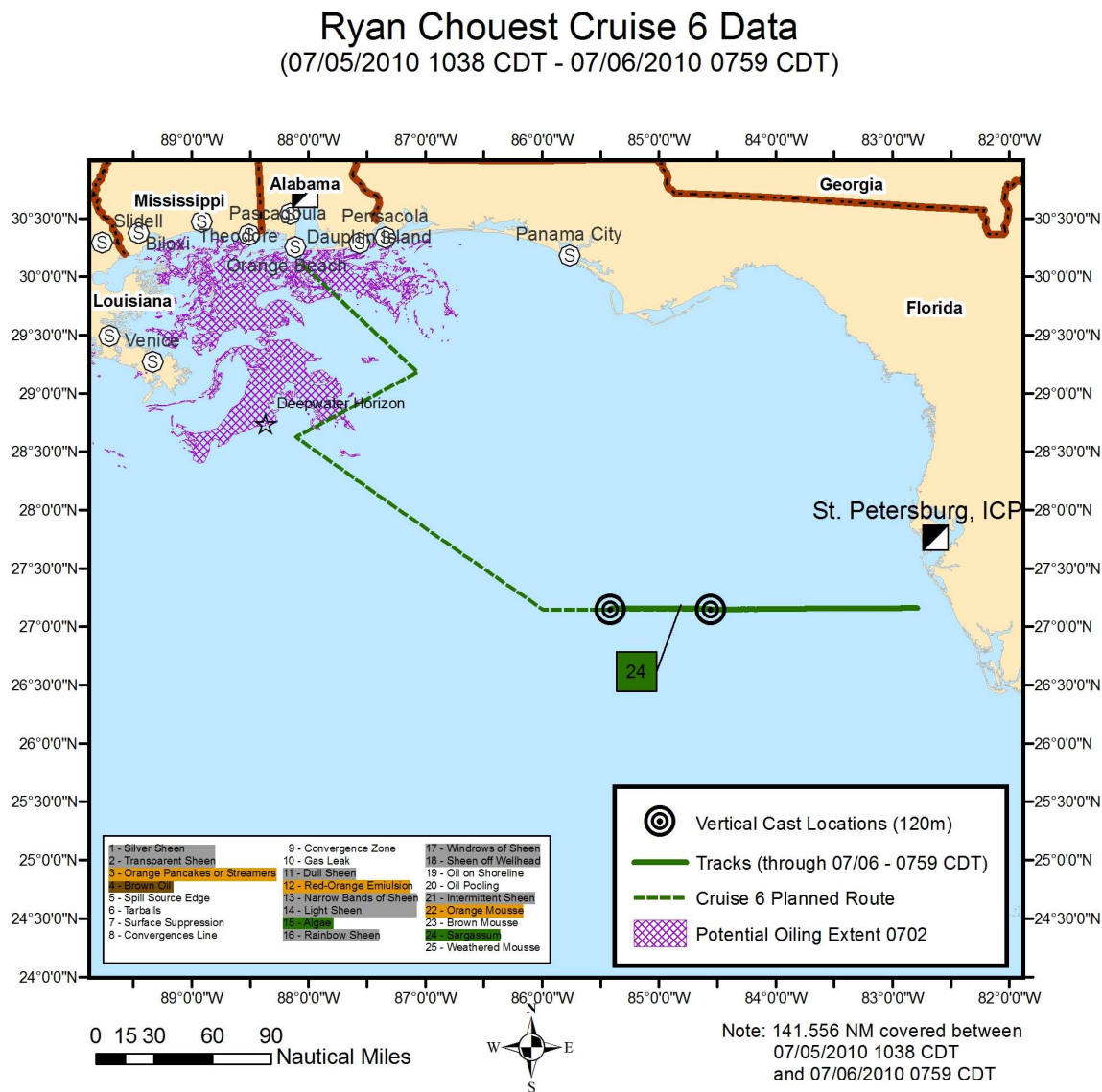


Figure 1. Planned course plotted for Cruise 6. Purple shaded area represents outline extent of the slick from 07/02 ERMA composite.

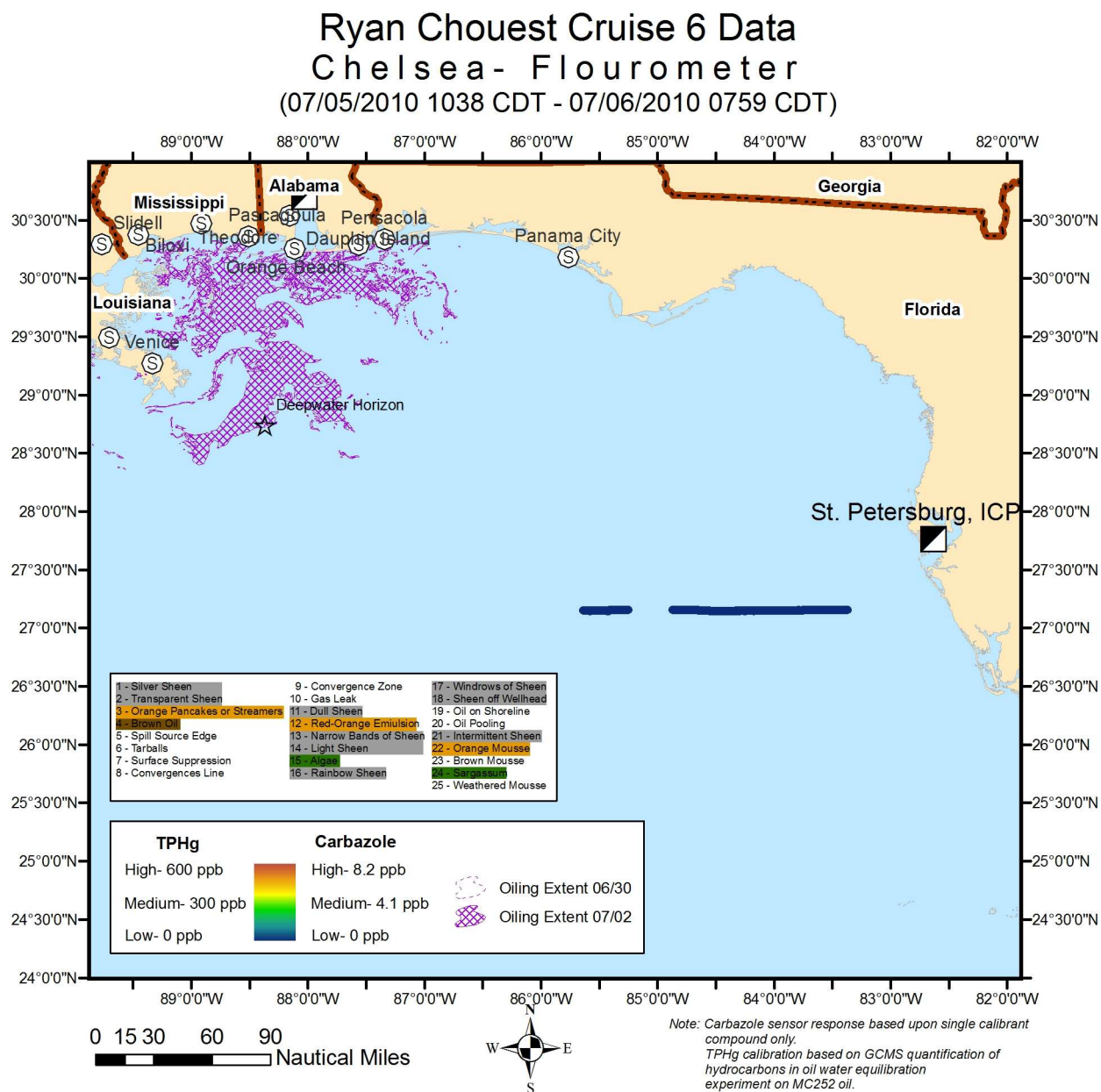


Figure 2. Chelsea fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

Ryan Chouest Cruise 6 Data

Trios - Fluorometer

(07/05/2010 1038 CDT - 07/06/2010 0759 CDT)

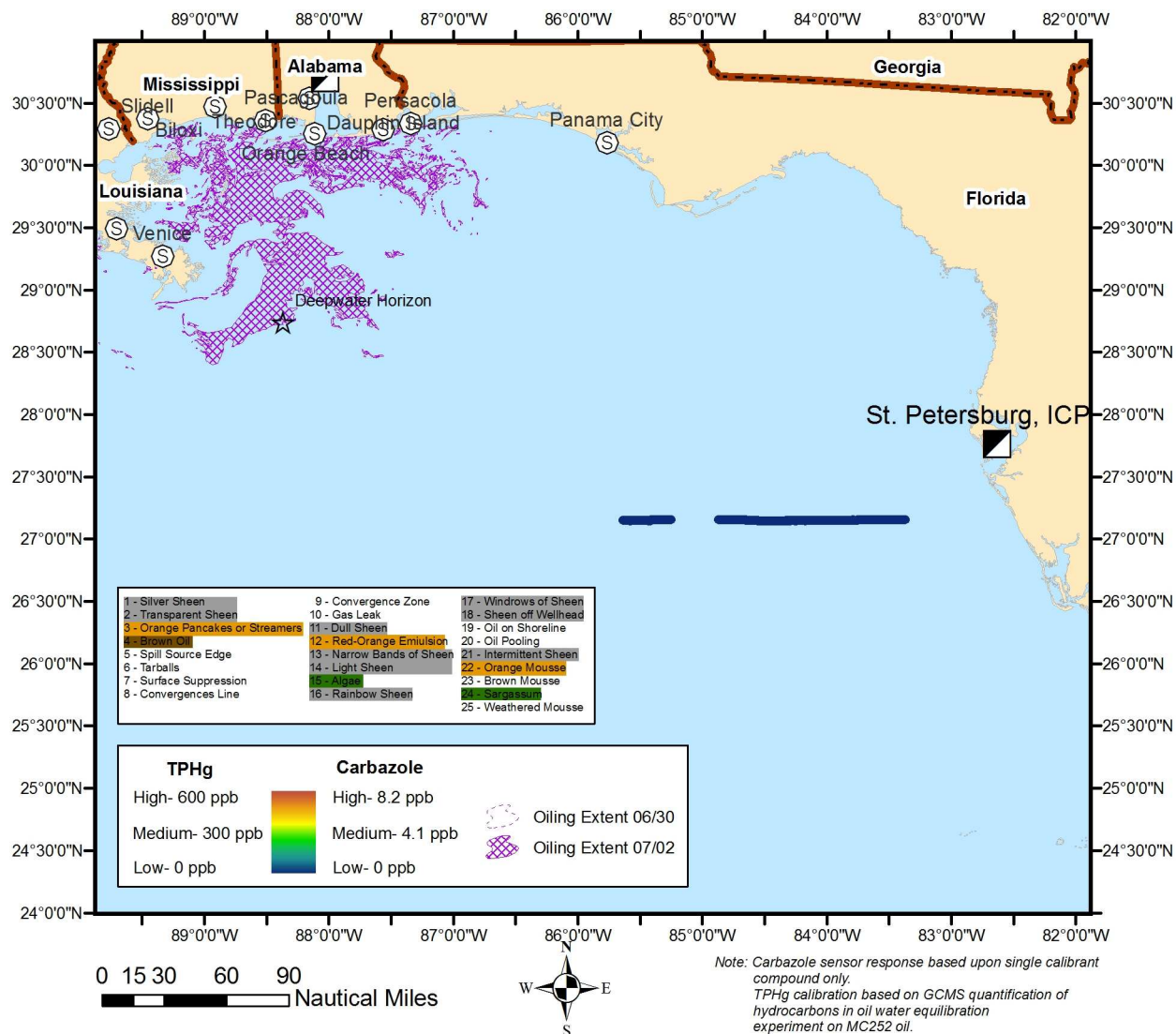


Figure 3. Trios fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.

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Contros - Fluorometer

(07/05/2010 1038 CDT - 07/06/2010 0759 CDT)

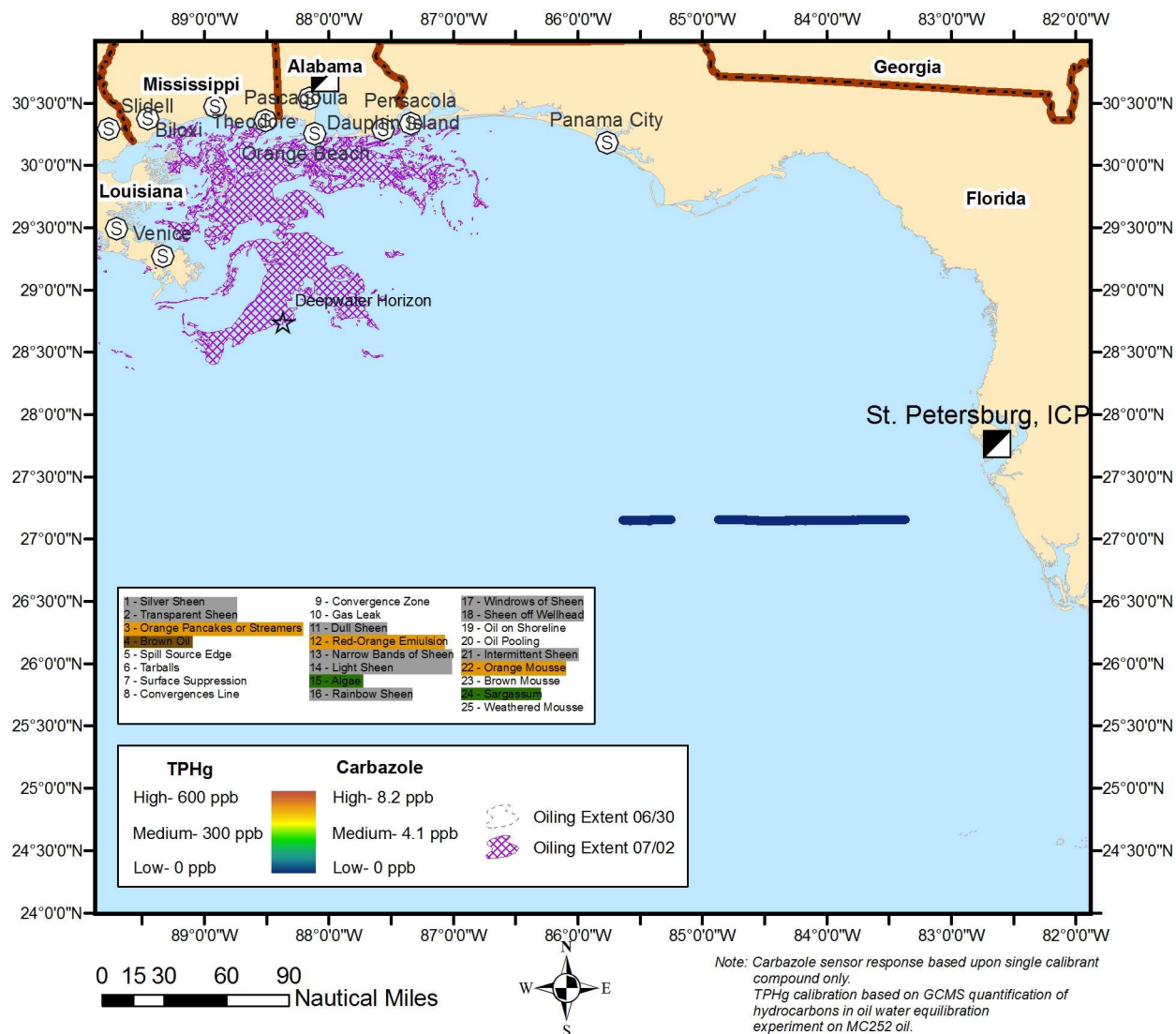


Figure 4. Contros fluorometer results plotted with location on cruise 6 track. Breaks in data occur when either data quality is poor or the systems were turned off due to pump problems.



Photo 1. Mammal spotted on path to Cruise track 6.

Problems/operational issues:

The Entrix, C&C and NOAA representatives aboard attempted, unsuccessfully, to investigate the internet issue. This means we are constrained to the last ERMA footprint that was downloaded on 7/02/2010.

Planned activities for next 24 hours:

Stay on course with the revised Cruise 6 route. Anticipate arrival at the next set of designated locations where the vertical cast system would be deployed.